UNITED STATES PATENT OFFICE.

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THERMOSTATIC CUT-OUT FOR ELECTRIC LIGHTING SYSTEMS.

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To all whom it may concern:

Be it known that I, HENRY A. SEYMOUR, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Thermostatic Cut-Outs for Electric Lighting Systems; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

One of the most serious objections urged against the adoption of the electric light, both by the users and the owners and insurers of buildings in which it is desired to locate such lights, is the increased danger of loss by fire, owing to the great reluctance of firemen to enter and work in a burning building provided with electric lights. The apprehended and real danger is that a fatal electric shock might be received from the terminals of the wires, or from one grounded wire, should the conductor in the building become broken from any cause.

The object of my invention is to obviate all danger from the causes specified by providing a switch and suitable devices to be actuated by heat of a fire originating in any part of a building provided with electric lights, whereby the electric current will be automatically cut off from the conductors leading through the building in case of fire, and thereby enable the firemen to work in the burning building with absolute safety, so far as the electric current is concerned.

With these ends in view my invention consists essentially, in combination with the main circuit of an electric lighting system, of a switch and suitable devices, constructed and arranged subtantially as hereinafter described, and adapted to be operated by heat and automatically cut out of circuit the electric conductors extending through a building when the temperature therein exceeds a predetermined degree.

My invention further consists, in combination with the main circuit of an electric lighting system, of a switch and suitable devices, constructed and arranged substantially as hereinafter described, and adapted to automatically cut out of circuit the electric conductors extending through a building when the temperature therein exceeds a predetermined degree and short-circuit the currents through the main conductor.

My invention further consists in certain features of construction and combinations of parts, as will be hereinafter explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical section of a building provided with one form of my improvement. Fig. 2 is a view in side elevation of one form of switch. Fig. 3 is a plan view of the stationary portion of the switch. Fig. 4 is a similar view of the oscillating disk of the switch. Fig. 5 represents the switch, showing the contact-plates in position for conducting the current through the conductors of the building. Fig. 6 is a similar view, showing contact-plates in their position when the switch is operated to cut off the current from the conductors in the building and short-circuit the current through the main conductor. Fig. 7 is a view in vertical section of the switch. Fig. 8 is a transverse section of another form of switch. Fig. 9 shows one form of fusible connections. Fig. 10 represents another form of fusible connections, and Fig. 11 represents a modification.

A represents a building, and B B′ the two ends of the electric conductor of an electric-light circuit within the building. The ends of the conductor are located at any desired point. They may lead to a closed switch box or casing placed on the outside of the building near the sidewalk, or they may extend down to a switch-box located in the basement of the building or on the first floor near the front, the switch being arranged so that it may be operated by a key from the outside or inside. The switch may be placed in an iron casing, or one made of masonry or any fire-proof material. The end B is electrically connected with the stud or plate *a* of the switch-board D and the other end, B′, with the stud or plate *a′*. One end, C, of the main conductor, through which the electric current is supplied to the circuit in the building, is electrically connected with the stud or plate *b* and the other end, C′, with the stud or plate *b′* of the switch-board.